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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/608,986

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James H. Hogg

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EXAMINER

FRANCIS, MARK P

ART UNIT

PAPER NUMBER

2193

DATE MAILED: 09/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/608,986

Applicant(s)

HOGG ET AL.

Examiner

Mark P. Francis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-16, 20-25, 29-32, 34-46, 48-51, 55-66 and 69-72 is/are rejected.
- 7) ☒ Claim(s) 12, 17-19, 26-28 and 33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the application filed on June 26, 2003.
2. Claims 1-72 have been examined.

Oath/Declaration

3. The Office acknowledges receipt of a properly signed oath/declaration filed June 26, 2003.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 43-58 and 59-72 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claims 43 and 59,

According to the 101 Interim Guidelines, The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a § 101 judicial exception, in that the process claim must set forth a practical application of that § 101 judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had "no substantial practical application."). "[An application of a law of nature or mathematical formula to a ... process may well be deserving of patent protection." Diehr, 450 U.S. at 187, 209 USPQ at 8 (emphasis

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added); see also 21 Corning, 56 U.S. (15 How.) at 268, 14 L.Ed. 683 ("It is for the discovery or invention of some practical method or means of producing a beneficial result or effect, that a patent is granted . . ."). In other words, the opposite meaning of "tangible" is "abstract."

Applicant merely defines a computing device for extensible metadata, the computing device comprising of a processor and a memory that enforces data format and table relationships in extensible metadata with an extensible metadata schema. Applicant has failed to define or disclose, the function of enforcing the data format and table relationships in extensible metadata using the extensible metadata schema. Applicant merely states the extensible metadata represents non-standard metadata for at least one new feature that is not located in the standard metadata, the extensible schema provides information to differentiate standard metadata from non-standard extensible metadata, and emitting the extensible metadata into an assembly all of which can be implemented using software means only without the use or function of a computer readable storage medium or device. Thus, the claim as a whole can be implemented using software means only and does not result in a tangible practical application.

The rejection of the base claim are incorporated into their dependent claims.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

7. A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-11,13-16, 20-25,29-32, 34-46, 48-51, 55-66, and 69-72 are rejected under 35 U.S.C. 102(e) as being anticipated by Alumbaugh. (U.S. PGPUB 2003/0172368)

Independent claims

With respect to claims 1 and 25, Alumbaugh discloses a computer-readable medium for extensible metadata,(See Fig. 1, element 3 and related text) the computer-readable medium comprising computer-program executable instructions executable by a processor for: compiling source code to generate an assembly; (Col 14:0267, "...into compilation-ready source code...") during compiling operations, emitting metadata and extensible metadata(Col 6:0105, "...extensibility...") into the assembly, the extensible metadata representing non-

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standard metadata that represents an extension to standard metadata; (Col 10:0233-0234, "...Schema discovery involves reading the meta-data stored in a data source...") and wherein the extensible metadata is self-describing to a extensible metadata consumer, ,(Col 10:0233, "...table names, table types,...") the extensible metadata comprising information to describe non-standard table layout information,(Col 10:0233, "...table names, table types,...") data type definitions, code classes, members, and/or class inheritance information. (Col 12:0255-0256, "...data values of both source and target elements...")

With respect to claims 43 and 59, Alumbaugh discloses a computing device for extensible metadata, (See Fig. 1, element 3 and related text) the computing device comprising:

means for enforcing data format and table relationships in extensible metadata with a extensible metadata schema,(Col 5:0088-0090, "...meta-relationships...") the extensible metadata representing non-standard metadata for at least one new feature that is not found in standard metadata, the extensible(Col 6:0105, "...a highly extensible...") metadata schema providing information to differentiate standard metadata from non-standard extensible metadata; (Col 5:0088-0090, "...data source's metadata...", Col 10:0234, "...compares schema information...")

means for emitting the extensible metadata into an assembly; (Col 14:0267, "...into compilation-ready source code...")

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and wherein the extensible metadata is self-describing to a extensible metadata consumer, (Col 6:0105, "...a highly extensible...") the extensible metadata comprising non-standard table layout information, ,(Col 10:0233, "...table names, table types,...") data type definitions, code classes, members, and/or class inheritance information. (Col 12:0255-0256, "...data values of both source and target elements...")

Dependent claims

With respect to claim 2, the rejection of claim 1 is incorporated and further, Alumbaugh discloses that the extensible metadata is self-describing and further describes table layout information, data type definitions, code classes, members, and/or class inheritance information for both standard and non-standard metadata. (Col 10:0233, "...table names, table types...")

With respect to claims 3,4,6 and 44, the rejection of claims 1 and 43 are incorporated respectively and further, Alumbaugh discloses that the extensible metadata further comprises table layout information, data type definitions, code classes, members, and/or class inheritance information. (Col 10:0233-0234, "...reading the meta-data stored in a data source...dependencies and constraints...")

With respect to claim 5, the rejection of claim 1 is incorporated and further, Alumbaugh discloses that the extension includes design-time information, a value array, and/or generics extensible metadata. (Col 10:0233-0234, "...reading the meta-data stored in a

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data source...dependencies and constraints...")

With respect to claims 7 and 34, the rejection of claims 1 and 25 are incorporated respectively and further, Alumbaugh discloses that the computer-program instructions for compiling further comprise instructions for enforcing data format and table relationships in the extensible metadata with a extensible metadata schema, the extensible metadata schema differentiating standard metadata tables from non-standard extensible metadata tables. (Col 10:0234, '...compares schema information for one historical view...")

With respect to claims 8,35,45 and 60, the rejection of claims 1,25,43 and 59 are incorporated respectively and further, Alumbaugh discloses that the computer-program instructions for compiling further comprise instructions for tagging the extensible metadata such that is can be differentiated by a metadata consumer from the standard metadata. (Col 14:0267, "...tags that translate...")

With respect to claims 9 and 36, the rejection of claims 1 and 25 are incorporated respectively and further, Alumbaugh discloses that compiling further comprises enforcing data format and table relationships in the extensible metadata with a extensible metadata schema, the extensible metadata schema differentiating standard metadata tables from non-standard extensible metadata tables. (Col 10:0233-0235, "...table names, table types,...")

With respect to claims 10,37 and 61, the rejection of claims 1,25 and 59 are incorporated respectively and further, Alumbaugh discloses that the computer-program instructions for compiling further comprise instructions for generating, by a primary compiler, a string heap to store character strings associated with the extensible metadata. (Col 10:0233-0235, "...table names, table types,...")

With respect to claims 11 and 22, the rejection of claim 1 is incorporated and further, Alumbaugh discloses that emitting the metadata further comprises interfacing with an Application Programming Interface exposed by a runtime. (Col 3:0048, "...Application Program Interface...")

With respect to claims 13,29,48, and 63, the rejection of claims 1,25, 43, and 59 are incorporated and further, Alumbaugh discloses that non-standard table layout information, data type definitions, code classes, members, and/or class inheritance information is included in a MetaToks table comprising one or more metadata tokens to index a metadata table or a metadata heap, each token indicating an indexed table and a row number of the indexed table.(Col 10:0233-0234, "...indexes..")

With respect to claims 14,30, and 49, the rejection of claims 1, 25, and 43, are incorporated respectively and further, Alumbaugh discloses wherein non-standard table layout information, data type definitions, code classes, members, and/or class

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inheritance information is included in a MetaCodedToks comprising one or more coded tokens, and for each coded token: an assigned number, a byte offset into a extensible metadata string heap to a corresponding name, a number of elements in a set of tokens being defined. (Col 12:0255-0256, "...have a string data type...")

With respect to claims 15,31,50 and 65, the rejection of claims 1,25,43 and 65 are incorporated respectively and further, Alumbaugh discloses wherein non-standard table layout information, data type definitions, code classes, members, and/or class inheritance information is included in a MetaCodedVals table comprising type reference, type definition, type specification, field, and property information for extensible metadata coded tokens. (Col 14:0267, "...to describe classes, objects, methods...")

With respect to claims 16,32,51 and 66, the rejection of claims 1,25,43 and 59 are incorporated respectively and further, Alumbaugh discloses that the extensible metadata comprises a MetaFeatures table comprising information for one or more new features, the information for each feature comprising a feature number, a substantially unique feature ID, a name of the feature. (Col 10:0234, "...Change Specification Browser...")

With respect to claims 20,39,55, and 69, the rejection of claims 1,25,43 and 59 are incorporated respectively and further, Alumbaugh discloses further comprising: loading, by a metadata consumer, the assembly into memory; interrogating, by the consumer,

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the runtime to discover presence of the extensible metadata, properties, and/or representation of the extensible metadata. (Col 11:0234-0239, "...reading the meta-data stored...")

With respect to claims 21,42,56, and 70, the rejection of claims 20,39, 55 and 69 are incorporated respectively and further, Alumbaugh discloses that the computer-program instructions for loading and interrogating are performed independent of modification to the consumer. (Col 11:0234-0239, "...reading the meta-data stored...")

With respect to claims 23,40,57, and 71, the rejection of claims 20,39, 55 and 69 are incorporated respectively and further, Alumbaugh discloses that interrogating further comprises discovering data type definitions for a specific one of multiple extended features provided by the extensible metadata. (Col 14:0267, "...to describe classes, objects, methods...")

With respect to claims 24,41,58, and 72, the rejection of claims 20,39, 55 and 69 are incorporated respectively and further, Alumbaugh discloses that interrogating further comprises determining at least one suggested action to direct the consumer with respect to use of the extensible metadata. (Col 11:0234-0239, "...reading the meta-data stored...")

With respect to claim 38, the rejection of claim 25 is incorporated and further,

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Alumbaugh discloses comprising computer-program instructions for utilizing the extensible metadata in a common language runtime computing environment. (Col 12:0255-0256, "...have a string data type...")

With respect to claim 46, the rejection of claim 43 is incorporated and further, Alumbaugh discloses that the computer-program instructions for enforcing further comprise instructions for generating a string heap to store character strings associated with the extensible metadata. (Col 12:0255-0256, "...have a string data type...")

With respect to claim 47, the rejection of claim 43 is incorporated and further, Alumbaugh discloses that the extensible metadata comprises a MetaColDef table for identifying layout of one or more tables, the MetaColDef table comprising, for each table of the tables: a tag indicating that the table is extensible metadata, a substantially unique table identifier, data type associated with each column in the table, and/or table name and width. (Col 10:0233-0235, "...table names, table types,...")

With respect to claim 52, the rejection of claim 43 is incorporated and further, Alumbaugh discloses that the extension introduces a new feature, and wherein the extensible metadata further comprises at least one suggested action for a metadata consumer to take with respect to the new feature, the at least one suggested action indicating the metadata consumer must understand semantics of the new feature or

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may safely ignore the new feature. (Col 10:0233-0235, "...table names, table types,...")

With respect to claim 53, the rejection of claim 43 is incorporated and further, Alumbaugh discloses that the extensible metadata comprises multiple respective rows of data, each row being tagged as extended, and wherein the extensible metadata further comprises uses-feature information for each row of the multiple respective rows, the information identifying a specific table and table row, a feature number associated with an extension identified by the table row, and an indication of one or more metadata consumer types that should understand the extension to properly function. (Col 10:0233-0235, "...table names, table types,...")

With respect to claim 54, the rejection of claim 53 is incorporated and further, Alumbaugh discloses that the one or more metadata consumer types comprise a browser, a linker, a compiler, and/or a runtime. (Col 10:0234, "...Change Specification Browser...")

With respect to claim 62, the rejection of claim 59 is incorporated and further, Alumbaugh discloses that the extensible metadata comprises means for identifying layout of one or more tables. (Col 10:0233-0234, "...Change Specification Manager compares meta-data information...")

With respect to claim 64, the rejection of claim 59 is incorporated and further,

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Alumbaugh discloses that the extensible metadata comprises means for representing coded tokens. (Col 12:0255-0256, "...have a string data type...")

With respect to claim 67, the rejection of claim 59 is incorporated and further, Alumbaugh discloses that the extensible metadata further comprises means for suggesting an action for a metadata consumer to take with respect to a new feature presented by at least a portion of the extensible metadata the action indicating the metadata consumer must understand semantics of the new feature or may safely ignore the new feature. (Col 10:0233-0235, "...table names, table types,...")

With respect to claim 68, the rejection of claim 59 is incorporated and further, Alumbaugh discloses wherein the extensible metadata further comprises multiple respective rows of data, each row being tagged as extended, and wherein the extensible metadata further comprises means for identifying a specific table and table row in the extensible metadata, a feature number associated with an extension identified by the table row, and an indication of one or more metadata consumer types that should understand the extension to properly function. (Col 10:0233-0235, "...table names, table types,...")

Allowable Subject Matter

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9. Claims 12,17,18,19,26,27,28,33, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

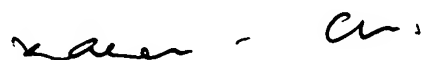
Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark P. Francis whose telephone number is (571) 272-7956. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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